

Application No. 10/736,482
Reply to Office Action of November 30, 2005
Amendment dated February 23, 2006

REMARKS

This Amendment responds to the Office Action mailed November 30, 2005.

Claims 1-7 remain pending in the application and stand rejected. Claims 1, 4 and 6 have been amended herein. Applicant respectfully asserts that the amended claims are in complete condition for allowance and respectfully requests reconsideration in view of the amendments and the remarks set forth below.

Claims Rejected Over U.S. Patent No. 2,178,901 to Webster

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,178,901 to Webster. Claims 3, 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Webster '901. Claims 1, 4 and 6 are the only independent claims in this rejected group, and each has been amended herein to recite that the apparatus and methods are for testing pressure relief valves "including a sleeve having an annular passage, a valve spool within the annular passage, and a spring within the annular passage and cooperating with the valve spool to limit flow through the annular passage."

Applicant asserts that the amendments to claims 1, 4 and 6 overcome the rejections based on Webster '901 because Webster '901 does not teach or suggest an apparatus for testing a pressure relief valve, wherein the apparatus has the structure recited in the claims, which is separate from the structure of the pressure relief valve itself. Rather, Webster '901 discloses a pressure relief valve to which a pressure gauge is directly coupled. For at least these reasons, Applicant respectfully requests that the rejections of claims 1, 4 and 6 based on Webster '901 be withdrawn.

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Claims 2 and 3 depend from independent claim 1, claim 5 depends from independent 4, and claim 7 depends from independent claim 6. Accordingly, claims 2, 3, 5 and 7 are in condition for allowance for at least the reasons set forth above for independent claims 1, 4 and 6, and Applicant respectfully requests that the rejections of claims 2, 3, 5 and 7 based on Webster '901 be withdrawn

Claims Rejected Over U.S. Patent No. 5,597,008 to Overdiek et al.

Claims 1-7 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,597,008 to Overdiek et al. Claims 1, 4 and 6 are the only independent claims of this rejected group. While Applicant disagrees with the Examiner's interpretation of Overdiek '008, claims 1, 4 and 6 have been amended herein to more sharply define the claim language. Specifically, claim 1 is directed to an apparatus for testing hydraulic pressure relief valves, and has been amended herein to recite "a closure sealingly couplable to said body, proximate said aperture, to sealably secure said pressure relief valve within said cavity" (emphasis added). Claims 4 and 6 are directed to methods of testing the hydraulic pressure relief valve, and have been amended to recite that the respective methods comprise "sealingly securing a closure to the test apparatus to seal the valve within the cavity" (emphasis added).

Applicant asserts that Overdiek '008 does not teach or suggest an apparatus for testing hydraulic pressure relief valves, or methods of testing a hydraulic pressure relief valve, as recited in amended claims 1, 4 and 6. Specifically, Overdiek '008 is directed to a pressure relief valve testing and adjustment system wherein a pressure-limiting

valve 10 is placed into an open-ended housing 60 and is forced by a pressure device 88 into sealing engagement with the bottom of the housing. The test oil flows into the valve 10 through an oil inlet 64, but does not enter the bore 68 of the housing. (Overdiek '008 at col. 11, lines 13-16). The biasing force of spring 20 determines the pressure at which valve 10 opens to permit bypass flow, and is adjusted by positioning the valve seat 26 and opening 24 to preload spring 20. (Overdiek '008 at col. 9, lines 41-52). To determine the appropriate preload force, pressure device 88 is actuated by a motor 89 under the direction of controller 86 to gradually adjust the amount of insertion of valve seat 26 into housing 12 until a desired preload on spring 20 is attained.

The pressure device 88 of Overdiek '008 is not a closure that is sealingly couplable to the body of the device to sealably secure a pressure relief valve within bore 68. Rather, pressure device 88 of Overdiek '008 must be moveable relative to housing 60 to permit adjustment of the valve seat position when setting the valve to desired actuation pressure. There is no teaching or suggestion in Overdiek '008, nor any other reference of record, to seal bore 68. Moreover, there is no motivation to completely enclose valve 10 within bore 68, because pressurized oil does not flow into the bore during testing of the valves.

When the pressure-limiting valve 10, together with the valve seat 26, is pressed against the sealing 70, the pressure [sic] oil cannot flow from the inlet 64 outwardly, that is, it cannot flow into the bore 68 itself.

(Overdiek '008 at col. 11, lines 13-16 (emphasis added).) Because no oil flows into the bore, there is no need for a closure that is sealingly couplable to the body to sealingly secure the pressure relief valve within the cavity, as required by claims 1, 4 and 6.

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There is thus no motivation to modify the device of Overdiek '008 as asserted by the Examiner.

Similarly, there is no motivation to make the apparatus of Overdiek '008 with "a body constructed to withstand high pressure," as recited in claim 1. Since the bore 68 is not exposed to pressurized oil, as discussed above, there is no need to construct the housing 60 to withstand high pressures. For at least the reasons discussed above, Applicant respectfully requests that the rejections of claims 1, 4 and 6 based on Overdiek '008 be withdrawn.

Claims 2 and 3 depend from independent claim 1, claim 5 depends from independent claim 4, and claim 7 depends from independent claim 6. Accordingly, claims 2, 3, 5 and 7 are in condition for allowance for at least the reasons stated above for independent claims 1, 4 and 6. Applicant therefore respectfully requests that the rejections of claims 2, 3, 5 and 7 based on Overdiek '008 be withdrawn.

Conclusion

In view of the foregoing amendments to the claims and the remarks set forth herein, Applicant believes this case is in condition for allowance and respectfully request allowance of the pending claims. If the Examiner believes any issue requires further discussion, the Examiner is respectfully asked to telephone the undersigned attorney so that the matter may be promptly resolved. The Examiner's prompt attention to this matter is appreciated.

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Applicant is of the opinion that no additional fee is due as a result of this amendment. If any charges or credits are necessary to complete this communication, please apply them to Deposit Account No. 23-3000.

Respectfully submitted,

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